## **Recovery Plan Action Status**

Plan Name: South Florida Multi-Species Recovery Plan (68 spp.)

Plan Status: Final Plan Date: 18-May-99 Lead Agency: USFWS

Lead Office: South Florida Ecological Services Field Office 562-3909)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Rice rat (Oryzomys palustris natator)	2	rira-h1.1	Determine the status of rice rat habitat	Not Started			Florida Fish and Wildlife Conservation Commission, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	2	rira-h1.2.1	Continue Federal acquisition efforts.	Ongoing Current	FY 1995 - FY 1999		To be determined	Work type not yet selected	Labor type not yet selected	Cost dependent upon specific site and amount of land acquired. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	2	rira-h1.2.2	Support State, local and non- governmental organizationsý acquisition efforts.	Ongoing Current	FY 1995 - FY 1999		Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Cost dependent upon specific site and amount of land acquired. Action lead(s): FWC
Rice rat (Oryzomys palustris natator)	2	rira-h1.3.1	Protect rice rats on public lands.	Ongoing Current	FY 1995 - FY 1999		U.S. Federal Emergency Management Agency, U.S. Army Corps of Engineers, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Cost dependent upon type of protection provided. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	2	rira-h1.3.2	Protect rice rats on private lands.	Ongoing Current	FY 1995 - FY 1999		U.S. Federal Emergency Management Agency, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	Cost dependent upon type of protection provided. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	2	rira-h1.3.3	Coordinate with Federal, State and Monroe County agencies and private entities to develop management action to protect silver rice rat habitat.	Not Started			Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, South Florida counties	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS

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Rice rat (Oryzomys palustris natator)	2	rira-h1.3.4	Establish and protect 500 m buffers around Priority habitat.	Not Started			To be determined	Work type not yet selected	Labor type not yet selected	Cost dependent upon specific site and amount of land acquired for buffer zones. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-h1.3.5	Control free roaming horses on Cudjoe Key.	Not Started			To be determined	Work type not yet selected	Labor type not yet selected	Task currently conducted and cost is included in responsible agency's budget. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	2	rira-h1.3.6	Restrict access to silver rice rat habitat.	Not Started			South Florida counties	Work type not yet selected	Labor type not yet selected	Task currently conducted and cost is included in responsible agency's budget. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-h1.3.7	Eliminate exotic vegetation.	Ongoing Current	FY 1995 - FY 1999		South Florida counties	Work type not yet selected	Labor type not yet selected	Cost is per acre (ex. 1.5/acre); Total cost dependent upon number of acres infested with exotics. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	2	rira-h2.1	Re-establish natural hydrology and water circulation in silver rice rat habitat.	Not Started			U.S. Army Corps of Engineers, Florida Department of Transportation, Non-governmental organizations	Work type not yet selected	Labor type not yet selected	Too many variables to accurately determine cost. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-h2.2	Restore both occupied and unoccupied silver rice rat habitat.	Not Started			Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Naval Air Station Key West, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	Cost is per acre (ex. 1.0/acre); Total cost dependent upon number of acres restored. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	2	rira-h2.3	Improve water quality in freshwater sources and create freshwater sources.	Not Started			U.S. Army Corps of Engineers, Water Management Districts	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-h2.4	Improve habitat by planting or encouraging native plant species.	Not Started			To be determined	Work type not yet selected	Labor type not yet selected	Cost is per acre (ex. 0.5/acre); Total cost dependent upon number of acres improved. Action lead(s): FWS

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Rice rat (Oryzomys palustris natator)	3	rira-h2.5	Create habitat by refilling and creating suitable habitat areas.	Not Started			To be determined	Work type not yet selected	Labor type not yet selected	Cost is per acre (ex. 1.0/acre); Total cost dependent upon number of acres created for habitat. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-h3.1.1	Investigate stable home range and minimum area requirements.	Not Started			Florida Fish and Wildlife Conservation Commission, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Rice rat (Oryzomys palustris natator)	3	rira-h3.1.2	Investigate the effect of habitat change.	Not Started			Florida Fish and Wildlife Conservation Commission, Private industry, landowners, etc., Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	2	rira-h3.2.1	Investigate movement patterns and the spatial use of habitat to identify important core areas and corridors.	Not Started			Florida Fish and Wildlife Conservation Commission, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Rice rat (Oryzomys palustris natator)	2	rira-h3.2.2	Determine if the amount and configuration of habitat is sufficient to support a stable or increasing population of silver rice rats.	Not Started			Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Rice rat (Oryzomys palustris natator)	2	rira-h4.0	Monitor the status of silver rice rat habitat, particularly critical habitat, and examine ecological processes.	Ongoing Not Current			Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-h5.0	Increase public awareness of silver rice rat habitat, especially critical habitat, and instill stewardship.	Not Started			Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Non- governmental organizations	Work type not yet selected	Labor type not yet selected	NKDR visitor center provides information. Action lead(s): FWS

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Rice rat (Oryzomys palustris natator)	2	rira-s1.1	Conduct presence/absence surveys to determine the status of rice rats and refine definition of range.	Partially Complete	FY 2006		Public and private universities	Work type not yet selected	Labor type not yet selected	Distribution study, including rangewide trapping survey, was initiated by TAMU in 2004. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s1.2	Survey for the presence/ absence of black rats simultaneously with rice rat trapping.	Partially Complete	FY 2006		Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s1.3	Maintain and improve the GIS database for silver rice rats.	Not Started			Florida Fish and Wildlife Conservation Commission, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s2.1	Assign a biologist responsibility for implementing recovery actions for the threatened or endangered species of the Lower Keys.	Ongoing Current	FY 2000 - FY 2004		U.S. Fish and Wildlife Service	Work type not yet selected	Labor type not yet selected	FWS biologists assigned to South Florida Ecological Services Office and stationed at Big Pine Key. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s2.2.1	Develop a standard protocol for conducting, monitoring, and evaluating all reintroduction, translocation and supplementation efforts of silver rice rats using the IUCN/SSC Guidelines for Reintroductions.	Not Started			U.S. Fish and Wildlife Service, Naval Air Station Key West, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s2.2.2	Reintroduce silver rice rats on islands on the periphery of the silver rice ratýs range.	Obsolete			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s2.2.3	Reintroduce silver rice rats on Little Pine Key or other remote backcountry islands.	Obsolete			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s2.2.4	Conduct reinforcement/ supplementation of silver rice rats.	Obsolete			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS

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Rice rat (Oryzomys palustris natator)	3	rira-s2.3	Utilize Federal regulatory mechanisms for protection.	Ongoing Current	FY 1995 - FY 1999		U.S. Bureau of Land Management, U.S. Department of Agriculture, U.S. Geological Survey, Biological Resources Division, U.S. Fish and Wildlife Service, U.S. Geological Survey, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, Natural Resources Conservation Service , United States Coast Guard , U.S. Air Force	Work type not yet selected	Labor type not yet selected	Cost included in standard operating procedures of Federal agency's budget. Action lead(s): All Federal agencies
Rice rat (Oryzomys palustris natator)	3	rira-s2.4	Provide information about silver rice rats to Federal, State, county, and city agencies. Distribute information regarding the presence of silver rice rats, their protection under the ESA, and ways to minimize impacts.	Ongoing Current	FY 1995 - FY 1999		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Non- governmental organizations	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	2	rira-s2.5.1	Minimize cat predation on silver rice rats.	Planned	FY 2008		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Naval Air Station Key West, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	No systematic effort to control feral and free-range domestic cats is presently in place. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s2.5.2	Minimize competition and predation by black rats.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Naval Air Station Key West, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	No systematic effort to control black rats is presently in place. Action lead(s): FWS

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Rice rat (Oryzomys palustris natator)	3	rira-s2.5.3	Minimize raccoon impacts on silver rice rats.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Naval Air Station Key West, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	No systematic effort to control raccoons is presently in place. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s2.5.4	Eliminate fire ant colonies near rice rat habitat.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Florida Department of Agriculture and Consumer Services, Naval Air Station Key West, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s2.5.5	Control blatant killing and prevent poisoning.	Not Started			U.S. Fish and Wildlife Service, Florida Fish and Wildlife Conservation Commission, Naval Air Station Key West	Work type not yet selected	Labor type not yet selected	Although not a documented problem, task is currently conducted and cost is included in responsible agency's budget. Action lead(s):
Rice rat (Oryzomys palustris natator)	3	rira-s2.6	Investigate captive propagation options.	Not Started			U.S. Fish and Wildlife Service, Florida Fish and Wildlife Conservation Commission, Private industry, landowners, etc., Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s3.1	Determine if the total population size is large enough to prevent functional extinction and genetic extinction.	Not Started			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities

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Rice rat (Oryzomys palustris natator)	3	rira-s3.2	Examine the effect of resource limitation on the persistence of the silver rice rat.	Not Started			U.S. Fish and Wildlife Service, Naval Air Station Key West, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Rice rat (Oryzomys palustris natator)	3	rira-s3.3	Examine factors that affect the abundance and distribution of the silver rice rat.	Not Started			U.S. Fish and Wildlife Service, Naval Air Station Key West, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Rice rat (Oryzomys palustris natator)	2	rira-s3.4.1	Identify subpopulations vulnerable to extinction.	Not Started			U.S. Fish and Wildlife Service, Naval Air Station Key West, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Rice rat (Oryzomys palustris natator)	3	rira-s3.4.2	Determine the necessary number of subpopulations and level of exchange that will enable the silver rice rat to persist for 100 years.	Not Started			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Rice rat (Oryzomys palustris natator)	3	rira-s3.5	Determine a stable age structure, sex ratio, and group size for the silver rice rat.	Not Started			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Rice rat (Oryzomys palustris natator)	3	rira-s3.6	Conduct a silver rice rat reintroduction and evaluate its effectiveness in increasing the ratsý persistence.	Not Started			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s4.1	Develop methods to monitor demographic parameters.	Ongoing Not Current			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): universities
Rice rat (Oryzomys palustris natator)	2	rira-s4.2	Conduct long-term monitoring of the silver rice rat.	Not Started			U.S. Fish and Wildlife Service, Public and private universities	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS

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Rice rat (Oryzomys palustris natator)	3	rira-s5.1	Prepare educational material for the general public.	Not Started			U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	NKDR visitor center provides information. Action lead(s): FWS
Rice rat (Oryzomys palustris natator)	3	rira-s5.2	Develop and implement a cat, black rat, and raccoon control program.	Planned	FY 2008		U.S. Fish and Wildlife Service, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Naval Air Station Key West, Private industry, landowners, etc.	Work type not yet selected	Labor type not yet selected	Action lead(s): FWS